

Title (en)
Three-wire UPS system with artificial neutral

Title (de)
Dreiaderiges USV-System mit künstlichen Neutralen

Title (fr)
Système d'alimentation sans coupure (UPS) à trois fils avec neutre artificiel

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Abstract (en)
The present invention provides an uninterrupted power supply system (200) for use of at least two UPS modules (206), comprising a three-phase power supply input (202) for connection of a three-phase AC power supply (204), a DC power supply input (210) for connection of a DC power supply (212), a AC power link (208) for connecting the three-phase power supply input (202) to the at least two UPS modules (206), and a common DC link line (214) connecting the DC power supply input (210) to DC links (216) of the at least two UPS modules (206), whereby the common DC link line (214) provides a common reference junction with a galvanic connection to a common pole of the DC power supply input (210), wherein the UPS system (200) comprises a magnetically coupled circuit (224), which is connected to the AC power link (208), for generating an artificial neutral (230), whereby the artificial neutral (230) is connected to the galvanic connection of the common DC link line (214) and provides an internal current return path (218) for the at least two UPS modules (206) to maintain independent voltage regulation of its DC link (216) for the UPS modules (206) when powered from the three- phase power supply input (202). The present invention also provides a corresponding method for operation of an uninterrupted power supply system (200) for use of at least two UPS modules (206).

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Citation (search report)

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